

Organizational Silence

A Story for the Safety Awareness Campaign
(with colorful and exciting illustrations)



Normal Silence

Organizational Silence



***It is unwise to leave a live dragon out of your calculations,
if you live near him. -- JRR Tolkien (The Hobbit)***



NASA lives near the dragons

- Mission-Project Driven
- Large but close knit organization with powerful leaders
- Highly visible, complex projects with schedule with budget pressure
- Team environment where the team is charged with achieving success
- And.....there are **ACTUAL** people involved

These conditions are the breeding ground for the Dragon



Introduction to a Dragon Water Ingestion Projects

- Demonstrate immunity of new aircraft designs to ingestion of standing water at takeoff / landing speeds.





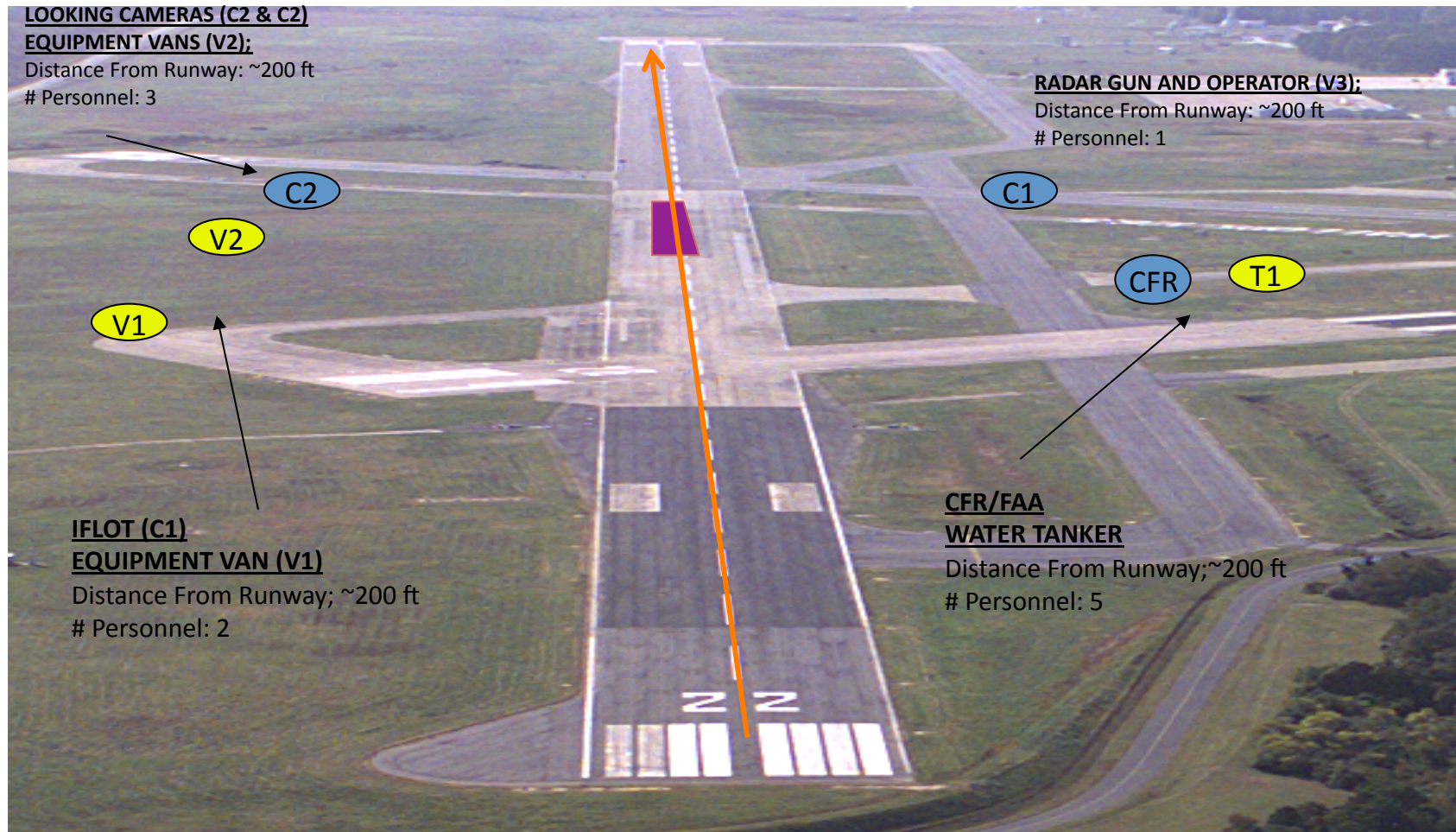
Anatomy of a Dragon

- Needed:
 - 1 Modified aircraft
 - With test pilot
 - A flat, low traffic runway
 - Control tower with Ops Lead
 - Cameras with a good view of the air intakes
 - 2 weeks (accounting for weather, technical glitches)
- Process
 - Place water on runway at FAA-specified depths
 - Aircraft rolls through at takeoff/landing speed
 - Snap picture of engine air intake





Operations Plan





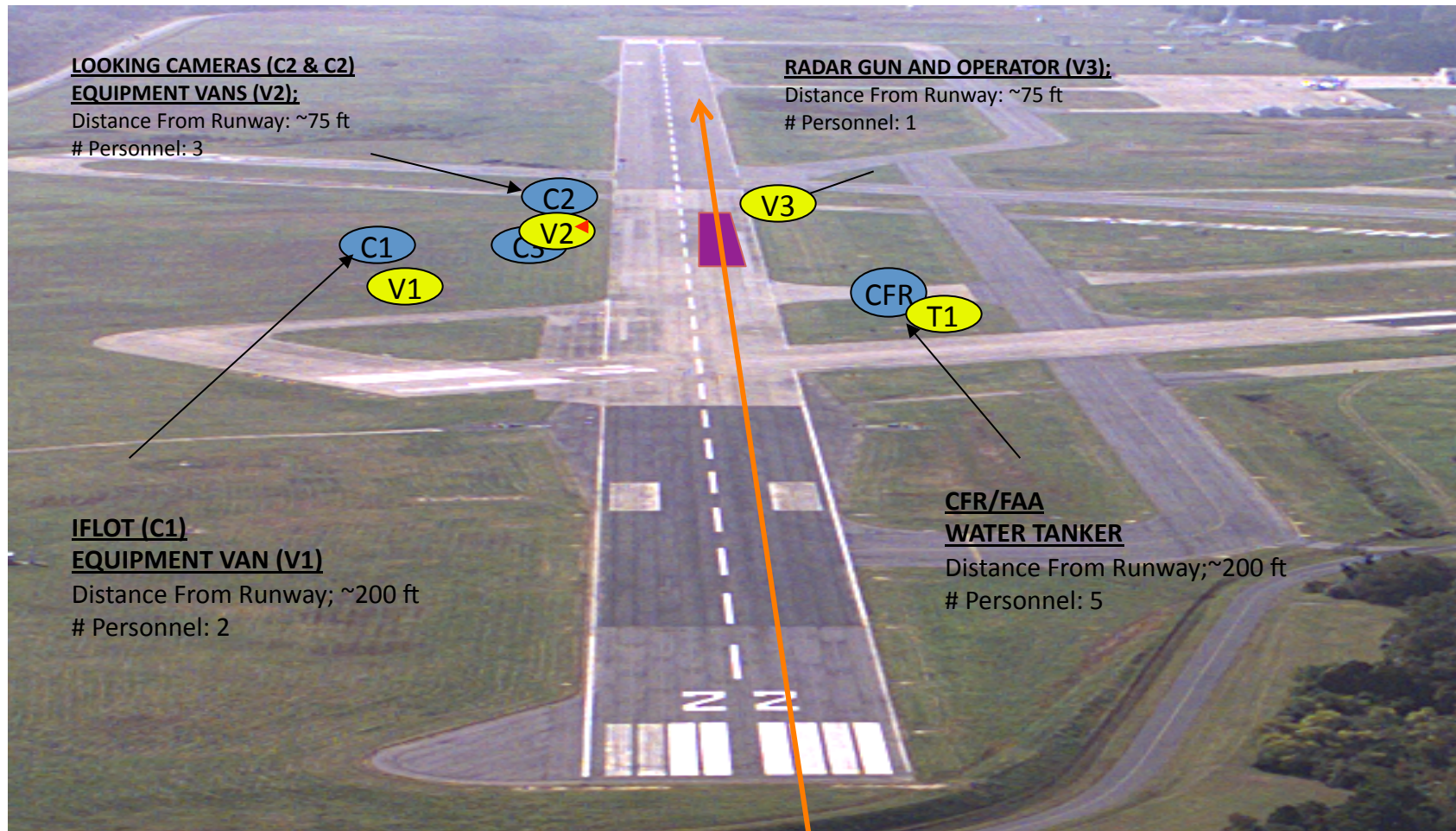
The Dragon Grows

- Operation Reviewed and Approved
 - Operation is completely encompassed by past experience
 - Aircraft sizes, speeds, technical requirements
 - The normal AND EXPECTED procedures and safety measures are in place
 - Lessons Learned from past missions incorporated into operations plans
 - Visual cues, instrument placement, wind/speed limits, Crash Fire Rescue staging, camera selection
- Experienced team
- Operations proceeds well through multiple runs
- Minor requirements changes with each run after day 1
 - Reviewed and approved by team and customer



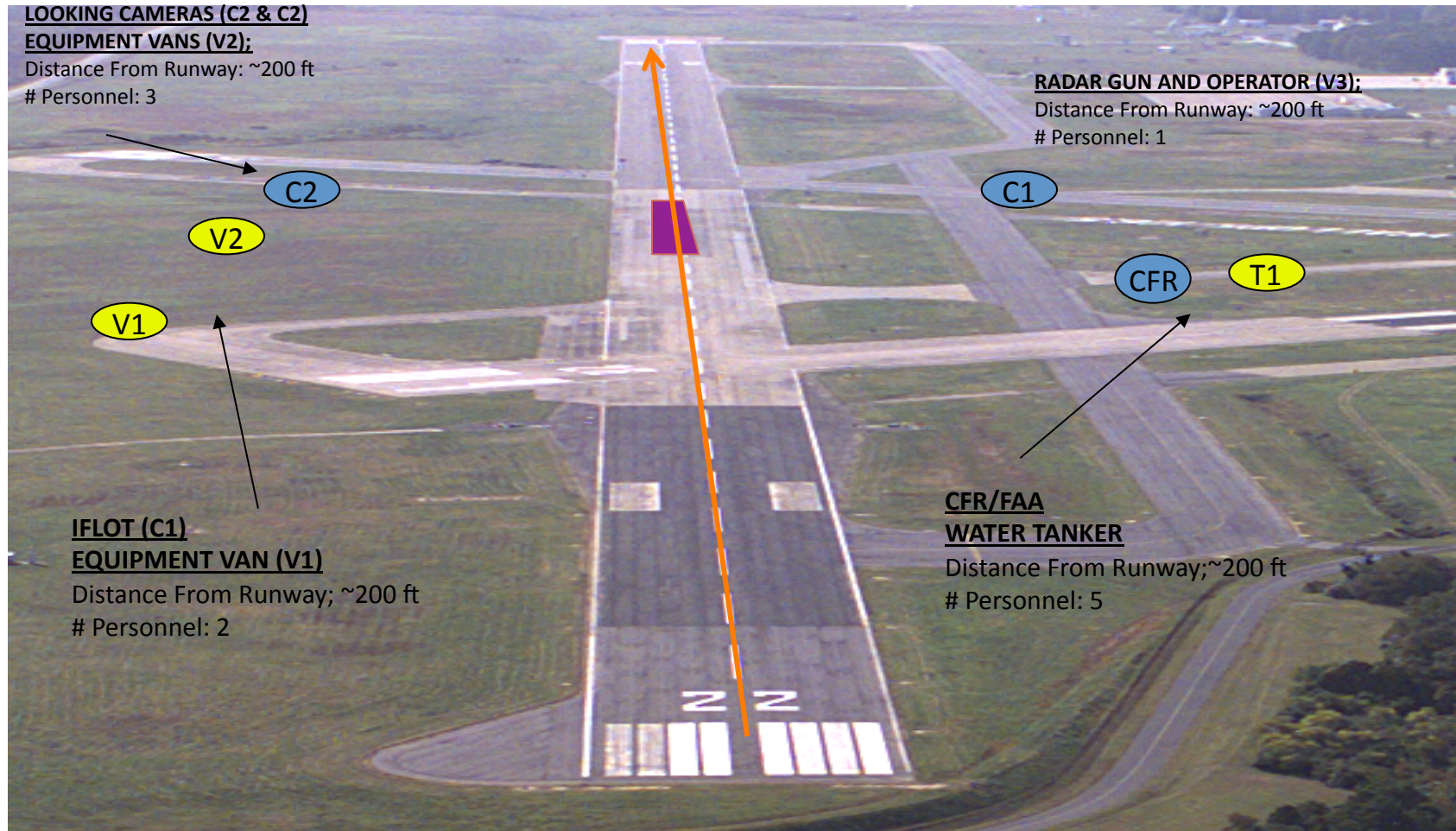


Mission Operations at Last Run (Run 11) (Implementation after iterated small changes)





Original Operations Plan for Comparison





What the Dragon looks like when it is finally
attacking

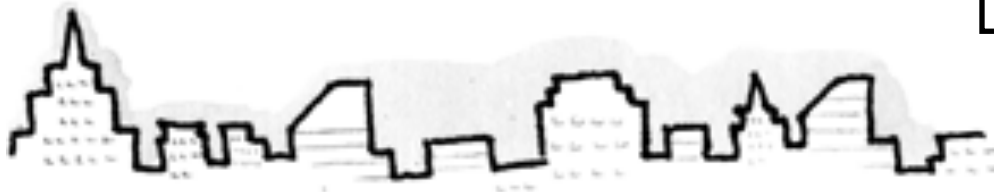




Elements of and Thoughts on Organizational Silence, Dragons, and Dragon Slaying



We lose some dexterity, but we are very confident



Leo
Crews



"hey fans! im at bat,, btm 9th, bases loaded, score tied--oops, jst got called strike1!"

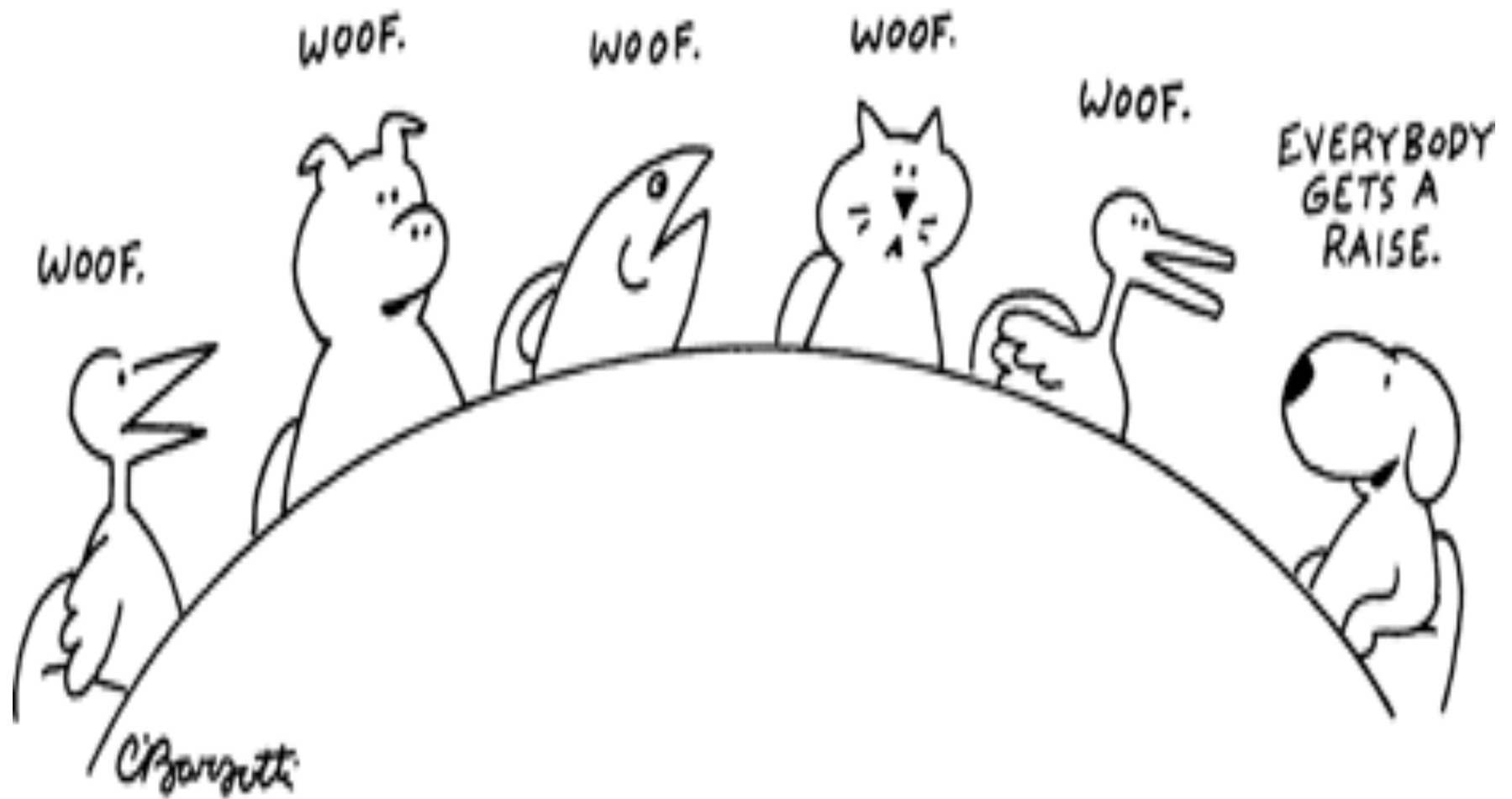


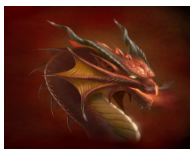
Let's never forget that the public's desire for transparency must be balanced against our need for autonomy.



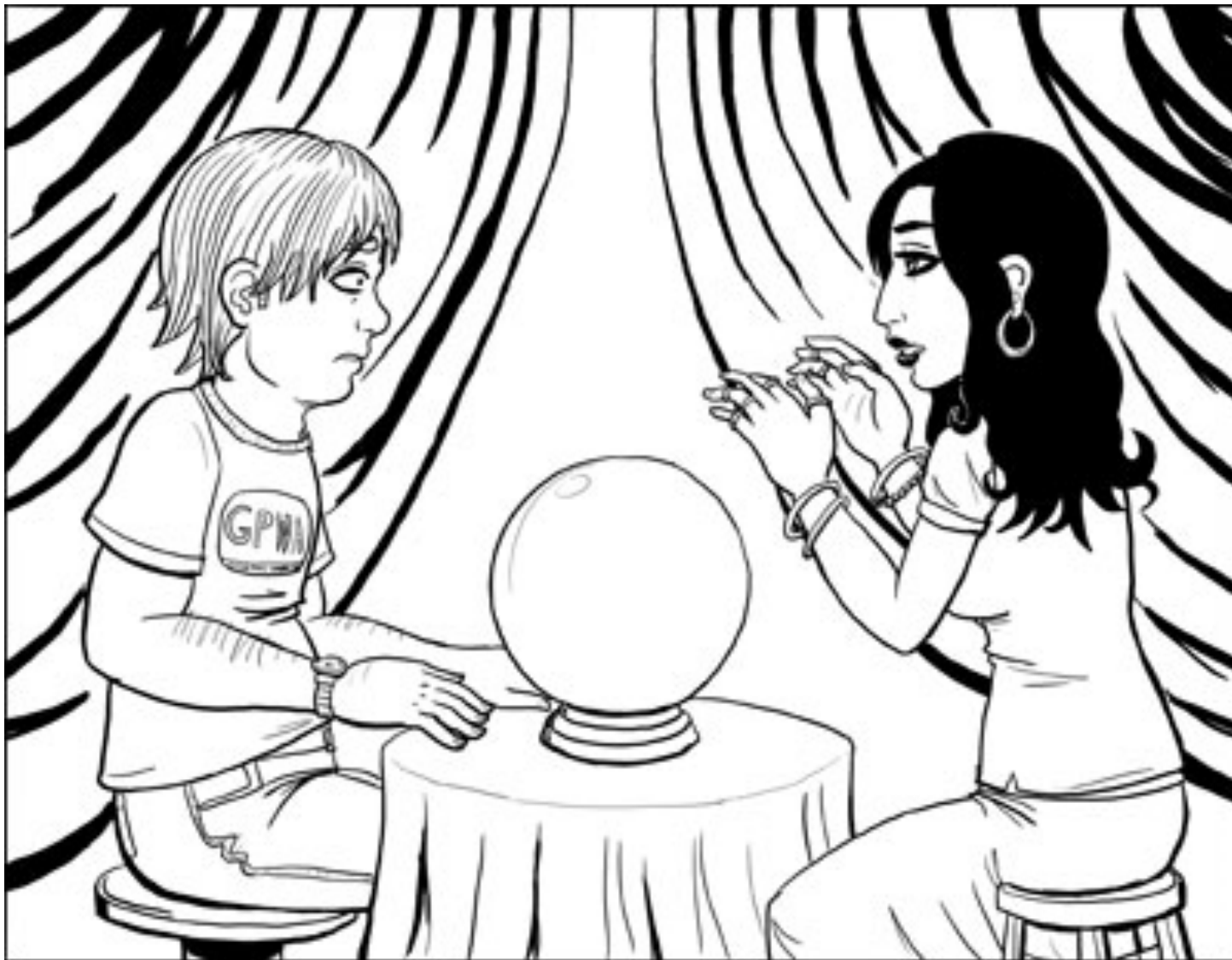
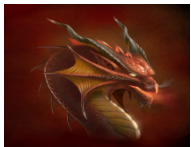
C. Swartz

"Damn it, when things were going well there was nothing but eye contact."





I thought he was about to be knighted, didn't you?



*You will make the same foolish mistakes you have made before, not only once
but many many times again*

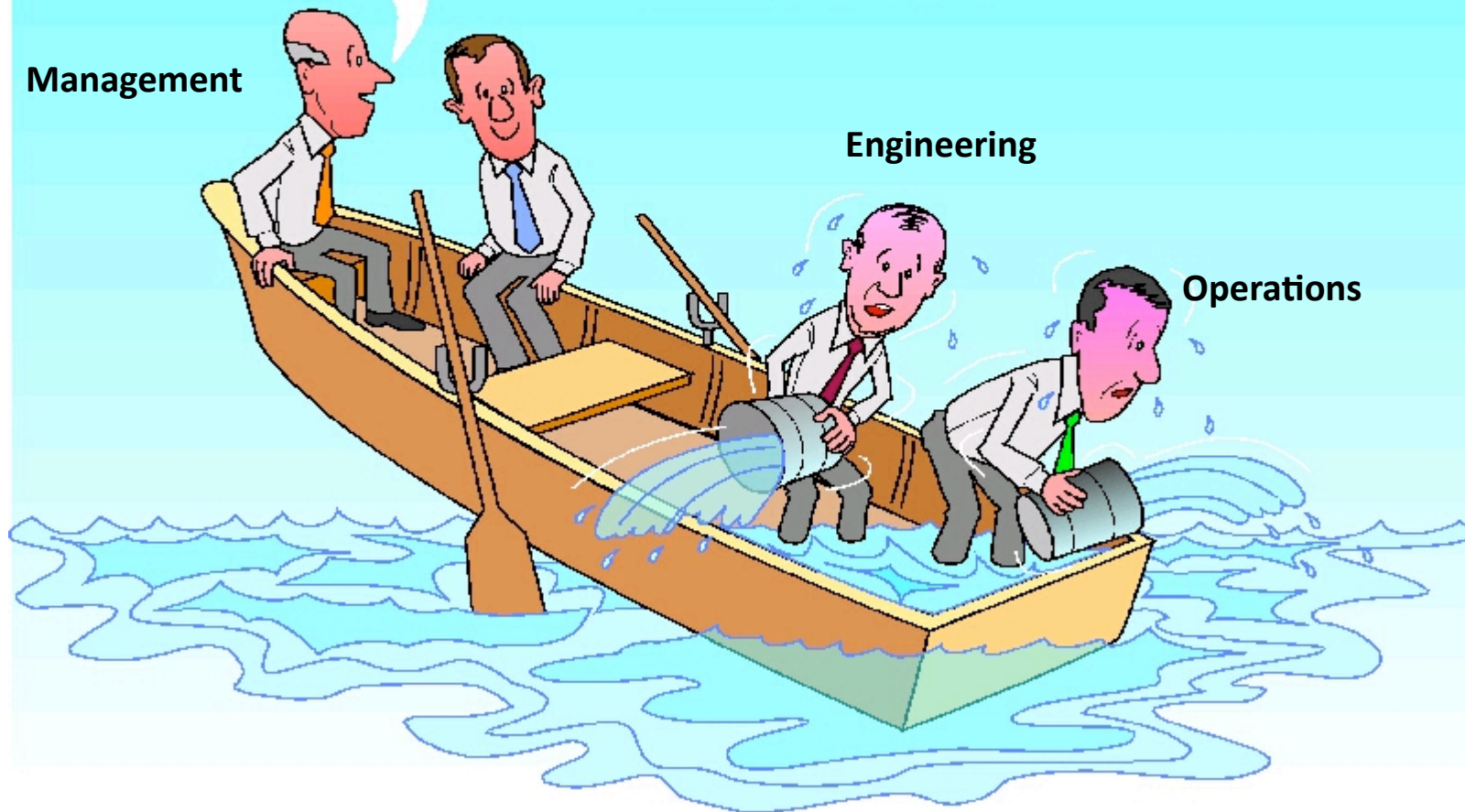


**I'm sure glad the
hole isn't in our
end o o o**

Management

Engineering

Operations





Shameless appeal to an Oscar winning film





What “EVERYONE” Knows

- What almost hurt someone last time.
- How far is too far, or too much, or too long, or too hard...and how close we are to the edge.
- Which organizations / people don't get along AND how that stress impacts communication.
- How things REALLY happen and which “rules” don't get followed.
- What ‘really’ went wrong
- What almost went wrong and who ‘really’ saved the day.
- That “LL” doesn't stand for ‘lessons learned’. It really just means ‘lessons listed’ until something is done.
- What places will never get seen during the inspection --- because they would never pass it.
- That the checklist doesn't really matter as much as the person checking the boxes.
- That organizations don't fix problems...people fix problems.
- Which manager you can talk to when something is wrong.... and which one you can't.



It really is true that “everyone knows”

Maybe, YOU know....

The question is,

What are you going to do about it?

**Your only weapon is a willingness to
communicate.**

Death of the Dragon



You have a sword. It is seems small, but it's all you have.....it's all WE have.